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THE BEAVER.

[Beavers, with their Huts, and a Dam.]

The extraordinary instincts of the beaver, in a state of freedom, have long furnished one of the most attractive subjects of Natural History. Much that is false and exaggerated has found its way into the common descriptions of the habits of these animals; and the really extraordinary qualities which the species display, have been referred to an intelligence approaching that of the human race. The singular actions of the beaver are suggested by instinct alone—the same instinct which guides the ant and the bee. Each individual beaver is precisely the same in its faculties as another; they are all untaught—they are all incapable of teaching—they all remain the same in point of intelligence from generation to generation.

The exaggeration which absurdly prevails with regard to the habits of the beaver may be referred to unavoidable causes. The species are exceedingly timid and vigilant, and invariably labour in the night-time. Thus, few persons competent to observe them accurately have had the opportunity of doing so. The greater part of our information is derived from the fur-traders and Indians; and these men are ignorant and credulous, deceiving themselves and deceiving others. The best account we have seen of the habits of the beaver is that by Dr. John Godman, Professor of Natural History in the Franklin Institute of Pennsylvania. It is given in the second volume of his 'American Natural History;' and this we shall abridge.

The general aspect of the beaver, at first view, would remind one of a very large rat, and seen at a little distance it might be readily mistaken for the common musk-rat. But the greater size of the beaver, the thickness and breadth of its head, and its horizontally flattened, broad and scaly tail, render it impossible to mistake it, when closely examined, for any other creature.

In a state of captivity or insulation, the beaver is a quiet or rather stupid animal, evincing about as much intelligence as a tamed badger, or any other quadruped which can learn to distinguish its feeder, come when called, or grow familiar with the inmates of the house where it is kept. It is only in a state of nature that the beaver displays any of those singular modes of acting which have so long rendered the species celebrated. Their extraordinary instincts are applied to two principal objects: 1. To secure a sufficient depth of water to prevent it from being frozen to the bottom; 2. To construct huts, in which they pass the winter.

If beavers choose a spot for their residence where the water is not of sufficient depth, they set about obviating the inconvenience by building a dam. The

materials used for the construction of their dams are the trunks and branches of small birch, mulberry, willow, poplar, &c. They begin to cut down their timber for building early in the summer, but their edifices are not commenced until about the middle or latter part of August, and are not completed until the beginning of the cold season. The strength of their teeth and their perseverance in this work, may be fairly estimated by the size of the trees they cut down. Dr. Best informs us that he has seen a mulberry-tree, eight inches in diameter, which had been gnawed down by the beaver. Dr. Godman saw, while on the banks of the Little Miami river, several stumps of trees, which had evidently been felled by these animals, of at least five or six inches in diameter. These are cut in such a manner as to fall into the water, and then floated towards the site of the dam or dwellings. Small shrubs, &c. cut at a distance from the water, are dragged with their teeth to the stream, and then launched and towed to the place of deposit. At a short distance above a beaver-dam the number of trees which have been cut down appears truly surprising, and the regularity of the stumps which are left might lead persons unacquainted with the habits of the animal to believe that the clearing was the result of human industry.

The figure of the dam varies according to circumstances. Should the current be very gentle, the dam is carried nearly straight across; but when the stream is swiftly flowing, it is uniformly made with a considerable curve, having the convex part opposed to the current. Along with the trunks and branches of trees they intermingle mud and stones, to give greater security; and when dams have been long undisturbed and frequently repaired, they acquire great solidity, and their power of resisting the pressure of water and ice is greatly increased by the willow, birch, and other cuttings occasionally taking root, and eventually growing up into something of a regular hedge. The materials used in constructing the dams are secured solely by the resting of the branches, &c. against the bottom, and the subsequent accumulation of mud and stones, by the deposit of the stream or by the industry of the beavers.

The dwellings of the beaver are formed of the same materials as their dams, and are very rude, though strong, and adapted in size to the number of their inhabitants. These are seldom more than four old and six or eight young ones.

When building their houses, they place most of the wood crosswise and nearly horizontally, observing no other order than that of leaving a cavity in the middle. Branches which project inward are cut off with their teeth and thrown among the rest. The houses are by no means built of sticks first and then plastered, but all the materials, sticks, mud, and stones, if the latter can be procured, are mixed up together, and this composition is employed from the foundation to the summit. The mud is obtained from the adjacent banks or bottom of the stream or pond near the door of the hut. The beaver always carries mud and stones by holding them between his fore-paws and throat.

Their work is all performed at night, and with much expedition. When straw or grass is mingled with the mud used by them in building, it is an accidental circumstance, owing to the nature of the spot whence the mud was taken. As soon as any part of the material is placed where it is intended to remain, they turn round and give it a smart blow with the tail. The same sort of blow is struck by them upon the surface of the water when they are in the act of diving.

The outside of the hut is covered or plastered with mud late in the autumn, and after frost has begun to appear. By freezing it soon becomes almost as hard as stone, effectually excluding their great enemy, the wolverene, during the winter. Their habit of walking over the work frequently during its progress, has led to the absurd idea of their using the tail as a trowel. The habit of flapping with the tail is retained by them in a state of captivity, and, unless it be in the acts already mentioned, appears designed to effect no particular purpose. The houses, when they have stood for some time, and been kept in repair, become so firm from the consolidation of all the materials, as to require great exertion and the use of the ice-chisel, or other iron instruments, to be broken open. The laborious nature of such an undertaking may easily be conceived, when it is known that the tops of the houses are generally from four to six feet thick at the apex of the cone. Hearne relates having seen one instance in which the crown or roof of the hut was more than eight feet in thickness.

The door or hole leading into the beaver-hut is always on the side farthest from the land, and is near the foundation of the house, or at a considerable depth under water. This is the only opening into the hut, which is not divided into chambers.

All the beavers of a community do not co-operate in the fabrication of houses for the common use of the whole. Those who are to live together in the same hut, labour together in its construction, and the only affair in which all seem to have a joint interest, and upon which they labour in concert, is the dam, as this is designed to keep a sufficient depth of water around all the habitations.

In situations where the beaver is frequently disturbed and pursued, all its singular habits are relinquished, and its mode of living changed to suit the nature of circumstances, and this occurs even in different parts of the same rivers. Instead of building dams and houses, its only residence is then in the banks of the stream, where it is now forced to make a more extensive excavation, and be content to adopt the manners of a musk rat. More sagacity is displayed by the beaver in thus accommodating itself to circumstances, than in any other action it performs. Such is the caution which it exercises to guard against detection, that were it not for the removal of small trees, the stumps of which indicate the sort of animal by which they have been cut down, the presence of the beaver would not be suspected in the vicinity. All excursions for the sake of procuring food are made late at night, and if it pass from one hole to another during the day time, it swims so far under water as not to excite the least suspicion of the presence of such a voyager. On many parts of the Mississippi and Missouri, where the beaver formerly built houses according to the mode above described, no such works are at present to be found, although beavers are still to be trapped in those localities.

These animals also have excavations in the adjacent banks, at rather regular distances from each other, which have been called *washes*. These excavations are so enlarged within, that the beaver can raise his head above water in order to breathe without being seen, and when disturbed at their huts, they immediately make way under water to these washes.

The beaver feeds principally upon the bark of the aspen, willow, birch, poplar, and occasionally the alder, but it rarely resorts to the pine tribe, unless from severe necessity. They provide a stock of wood from the trees mentioned, during the summer season, and place it in the water opposite the entrance to their houses. They also depend in a great degree upon the large roots (of the *nuphar luteum*) which grow at the bottom of the lakes, ponds, and rivers, and may be procured at all seasons.

The number of young produced by the beaver at a litter is from two to five. The young beavers whine in such a manner as closely to imitate the cry of a child. Like the young of most other animals they are very playful, and their movements are peculiarly interesting as

may be seen by the following anecdote, related in the narrative of Capt. Franklin's perilous journey to the shores of the Arctic Sea:—"One day a gentleman, long resident in the Hudson's Bay country, espied five young beavers sporting in the water, leaping upon the trunk of a tree, pushing one another off, and playing a thousand interesting tricks. He approached softly, under cover of the bushes, and prepared to fire on the unsuspecting creatures, but a nearer approach discovered to him such a similitude betwixt their gestures and the infantile caresses of his own children, that he threw aside his gun and left them unmolested."

The beaver swims to considerable distances under water, but cannot remain for a long time without coming to the surface for air. They are therefore caught with greater ease, as they must either take refuge in their vaults or washes in the bank, or seek their huts again for the sake of getting breath. They usually, when disturbed, fly from the huts to these vaults, which, although not so exposed to observation as their houses, are yet discovered with sufficient ease, and allow the occupant to be more readily captured than if he had remained in the ordinary habitation.

To capture beavers residing on a small river or creek, the Indians find it necessary to stake the stream across to prevent the animals from escaping, and then they try to ascertain where the vaults or washes in the banks are situated. This can only be done by those who are very experienced in such explorations. The hunt takes place in winter, because the animal's fur is then in the best order. The hunter is furnished with an ice-chisel lashed to a handle four or five feet in length; with this instrument he strikes against the ice as he goes along the edge of the banks. The sound produced by the blow informs him when he is opposite to one of these vaults. When one is discovered, a hole is cut through the ice of sufficient size to admit a full-grown beaver, and the search is continued until as many of the places of retreat are discovered as possible. During the time the most expert hunters are thus occupied, the others with the women are busy in breaking into the beaver-houses, which, as may be supposed from what has been already stated, is a task of some difficulty. The beavers, alarmed at the invasion of their dwelling, take to the water and swim with surprising swiftness to their retreats in the banks, but their entrance is betrayed to the hunters watching the holes in the ice, by the motion and discolouration of the water. The entrance is instantly closed with stakes of wood, and the beaver, instead of finding shelter in his cave, is made prisoner and destroyed. The hunter then pulls the animal out, if within reach, by the introduction of his hand and arm, or by a hook designed for this use, fastened to a long handle. Beaver-houses found in lakes or other standing waters offer an easier prey to the hunters, as there is no occasion for staking the water across.

The number of beavers killed in the northern parts of America is exceedingly great, even at the present time, after the fur trade has been carried on for so many years, and the most indiscriminate warfare waged uninterruptedly against the species. In the year 1820, sixty thousand beaver skins were sold by the Hudson's Bay Company alone.

It is a subject of regret that an animal so valuable and prolific should be hunted in a manner tending so evidently to the extermination of the species, when a little care and management on the part of those interested might prevent unnecessary destruction, and increase the sources of their revenue.

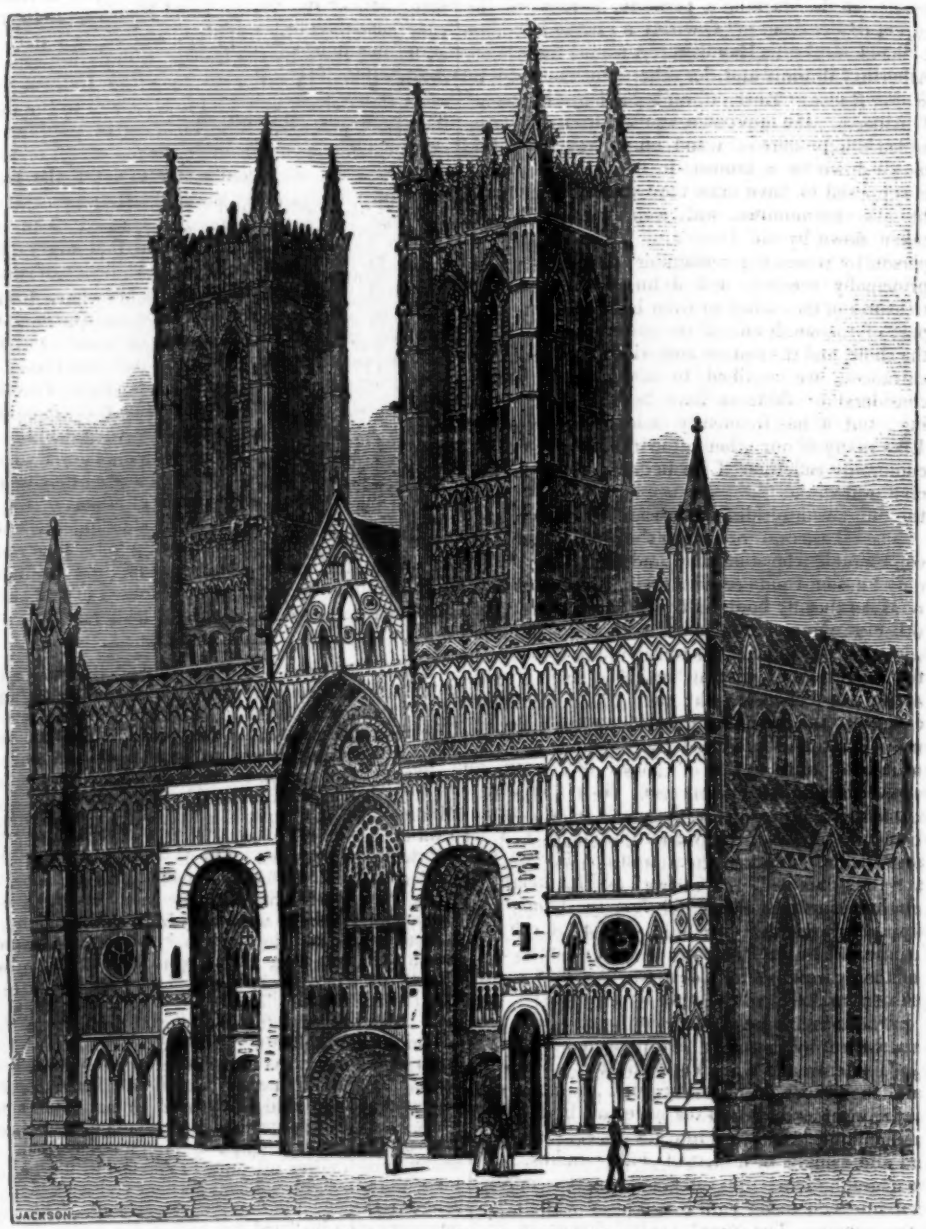
In a few years, comparatively speaking, the beaver has been exterminated in all the Atlantic and in the western states, as far as the middle and upper waters of the Missouri; while in the Hudson's Bay possessions they are becoming annually more scarce, and the race will eventually be extinguished throughout the whole continent.

The Indians inhabiting the countries watered by the tributaries of the Missouri and Mississippi, take the beavers principally by trapping, and are generally supplied with steel traps by the traders, who do not sell, but lend or hire them, in order to keep the Indians dependent upon themselves, and also to lay claim to the furs which they may procure. The business of trapping requires great experience and caution, as the senses of the beaver are very keen, and enable him to detect the recent presence of the hunter by the slightest traces. It is necessary that the hands should be washed clean before the trap is handled and baited, and that every precaution should be employed to elude the vigilance of the animal. The bait which is used to entice the beavers is prepared from the substance called castor (*castoreum*) obtained from the glandulous pouches of the male animal, which contain sometimes from two to three ounces.

During the winter season the beaver becomes very fat, and its flesh is esteemed by the hunters to be excellent food. But those occasionally caught in the summer are thin, and unfit for the table. They lead so wandering a life at this season, and are so much exhausted by the collection of materials for building, or the winter's stock of provision, as well as by suckling their young, as to be generally at that time in a very poor condition. Their fur during the summer is of little value, and it is only in winter that it is to be obtained in that state which renders it so desirable to the fur-traders.

Snake-Charmers.—Our account of the power supposed to be possessed by persons in the art of charming snakes, gave the best evidence we could collect upon the subject. The following communication would imply that the suspicions of trick in this curious process are unfounded. The writer says he received the narrative from a gentleman of high station in the Honourable Company's Civil Service at Madras—a man of undoubted veracity. "One morning, as I sat at breakfast, I heard a loud noise and shouting amongst my palenkeen-bearers. On inquiry, I learned that they had seen a large hooded snake (*Cobra capella*), and were trying to kill it. I immediately went out, and saw the snake climbing up a very high green mound, whence it escaped into a hole in an old wall of an ancient fortification: the men were armed with their sticks, which they always carry in their hands, and had attempted in vain to kill the reptile, which had eluded their pursuit, and in his hole he had coiled himself up secure; whilst we could see his bright eyes shining. I had often desired to ascertain the truth of the report, as to the effect of music upon snakes: I therefore inquired for a snake-catcher. I was told there was no person of the kind in the village; but after a little inquiry I heard there was one in a village distant three miles. I accordingly sent for him, keeping a strict watch over the snake, which never attempted to escape whilst we, his enemies, were in sight. About an hour elapsed when my messenger returned, bringing a snake-catcher. This man wore no covering on his head, nor any on his person, excepting a small piece of cloth round his loins: he had in his hands two baskets, one containing tame snakes—one empty; these and his musical pipe were the only things he had with him. I made the snake-catcher lean his two baskets on the ground at some distance, while he ascended the mound with his pipe alone. He began to play. at the sound of music the snake came gradually and slowly out of his hole. When he was entirely within reach, the snake-catcher seized him dexterously by the tail, and held him thus at arm's length; whilst the snake, enraged, darted his head in all directions—but in vain: thus suspended, he has not the power to round himself so as to seize hold of his tormentor. He exhausted himself in vain exertions; when the snake-catcher descended the bank, dropped him into the empty basket, and closed the lid: he then began to play, and after a short time, raising the lid of the basket, the snake darted about wildly, and attempted to escape; the lid was shut down again quickly, the music always playing. This was repeated two or three times; and in a very short interval, the lid being raised, the snake sat on his tail, opened his hood, and danced quite as quietly as the tame snakes in the other basket; nor did he again attempt an escape. This, having witnessed with my own eyes, I can assert as a fact."

LINCOLN CATHEDRAL.



[West Front of Lincoln Cathedral.]

This, regarded in its architectural character, is one of the noblest of our own cathedrals; and it is also venerable for its antiquity, and on account of the pious munificence of which it is a monument. The original seat of the bishopric of Lichfield was at the village of Dorchester in Oxfordshire. A church was built here so early as the year 635. Soon after this, namely, about the year 678, another see was established at Sydnacester, on the Trent, which was united with that of Dorchester in the ninth century, on the district in which it was situated being overrun by the Danes. The last bishop who resided during the whole time of his incumbency at Dorchester was Ulf, or Wulfin, who died in 1067. His successor, Remigius de Fescamp, called St. Remigius, removed the episcopal seat to Lincoln some time between 1072 and 1092. He also built the first cathedral there, which he just lived to finish, dying on the 9th of May, 1092, only a few days before its consecration; and the present structure is still the original cathedral of St. Remigius, although in part rebuilt and greatly enlarged. The lower portion of the west front, as it yet remains, is the work of that bishop. The next oldest parts of the building are those that were erected towards the end of the twelfth century, by Bishop Hugh de Grenoble, a prelate of extraordinary piety, and also popularly distinguished by the title of Saint. An earthquake which happened in 1185 had thrown down a great part of the work of St. Remigius, when St. Hugh undertook to restore the cathedral to more than its original splendour. The good bishop was so intent, we are told by Matthew Paris, upon the completion of his pious enterprise that he was wont to carry stones and mortar on his own shoulders for the use of the masons. The east side of the central transept is considered to be a still remaining portion of the additions made by St. Hugh. In 1239 the greater part of the central tower fell down; but it was rebuilt by the famous Robert Grostête, or Greathead one of the most learned per

sonages of that era, who was then bishop of the diocese. Bishop Grostete is one of those cultivators of physical science in the dark ages to whom is ascribed the fabrication of a brazen head, which is said to have been able to speak as if it had had life. A similar fable is related of Albertus Magnus and our other illustrious countryman Roger Bacon. To the tower rebuilt by Grostete, Bishop D'Alderly, who governed the see from 1300 to 1319, added a lofty spire of wood, which remained till it was blown down by a tempest in 1547. The same prelate is supposed to have built the two western towers, which he also surmounted with wooden spires. They were taken down by the Dean and Chapter in 1808. The person by whom the remaining parts of the fabric were principally erected, was John Welbourne, who was treasurer of the cathedral from 1351 to 1381. The upper part of the south end of the great transept, the stalls of the choir, and the statues and windows above the western entrances, are ascribed to him. Since his time no considerable additions have been made to the building; but it has frequently undergone extensive repairs. Like many of our other cathedrals, the Minster, as it is commonly called, of Lincoln was subjected, during the civil wars, and the existence of the commonwealth, to the most wanton desecration and injury.

The Cathedral of Lincoln stands upon ground of considerable elevation, and, overlooking a flat country, may be seen from the distance of twenty miles. Fuller remarks that its floor is higher than the roofs of most other churches. It is built in the usual form of a cross, with this peculiarity however, that besides the great transept in the centre, it has also shorter transepts both at the east and the west end. A building, called the cloisters, issues from the north wall, and to the extremity of this is attached the chapter-house, a circular structure, surrounded by deep buttresses, and surmounted by a pyramidal roof. The dimensions of the cathedral are very great, the whole length of the interior being 470 feet. The western front is 174 feet wide, and the length of the great transept is 220 feet in the interior. Its width is 63 feet, and its height 74. The chapter-house is above 60 feet in diameter, the roof being supported by a single cluster of columns in the centre. The circumference of this room is divided into ten compartments, or sides, one of which is occupied by the door, and the other nine by windows.

The most imposing exterior part of the cathedral is the west front. It has been preferred by some eminent judges to any thing in York Minster. The centre of the under portion of it is occupied by a large and deep door-way, leading into the nave, on both sides of which are humbler entrances into the aisles. Above these is a façade, richly ornamented with windows, niches, and statues. Groups of turrets crown the extremities, and two towers, rising to the height of 206 feet, surmount the whole. The great central tower is 262 feet in height; and pinnacles shoot from each corner both of it and of the western towers. Similar ornaments rise above each buttress along the whole extent of the nave and choir.

The Cathedral of Lincoln was in old times celebrated for the extraordinary splendour of its shrines, and other decorations; but the reformation stripped it of all this wealth. Down to a much later period, however, it was crowded with ancient tombs, many of them curious for their rich sculpture, others highly interesting on account of those whose remains they contained, and of whom they were memorials. They were, however, nearly all destroyed in the time of the commonwealth. When the storm of the civi. wars was felt to be approaching, Sir William Dugdale, in 1641, proceeded to copy all the epitaphs he could find in Lincoln and other cathedrals, "to the end," as he says in his Life, "that the memory of them, in case of that destruction then imminent, might be preserved for future and better times;" and in the second volume of Peck's Desiderata Curiosa is given an account of one hundred and sixty-three monumental inscriptions, as they stood in this cathedral in the year mentioned ("most of which," it is affirmed, "were soon after torn up, or otherwise defaced"), collected by Robert Sanderson, who afterwards became bishop of this see, and corrected by Dugdale's Survey.

DESCRIPTION OF SICILY.

THE beautiful and fertile island of Sicily, in the Mediterranean, occupies a surface of about 10,642 British square miles, and has a population of 1,787,771 inhabitants; being in the proportion of 168 to each square mile. Its population is said to have been much greater in ancient times, but it is now considerably more than it was fifty years ago, having been 1,123,163 in the year 1770; and 1,619,305 in the year 1798.

Sicily was formerly the granary of ancient Rome, and it has still capabilities of feeding a population very far exceeding its own, if its agriculture were not depressed and shackled by bad husbandry and erroneous regulations. Artificial meadows are unknown; so are potatoes, turnips, beets, and other green crops; unless when planted with beans or peas, the ground is constantly cropped with corn, with intervals of one or two years' fallow or wild pasture. The soil, though badly cleaned and manured, yields upon an average eight for one, in some districts sixteen for one, and in some few, even thirty-two for one. The land is let in large tracts to companies of farmers, or rather shepherds, some of them proprietors of ten or twelve thousand sheep. The different flocks feed together, and once a year an account is taken of them, the result of which is afterwards entered in a book, where each of the proprietors is debited and credited with his share of the proceeds and expenses, in proportion to his number of sheep, and credited with the proceeds of the milk converted into cheese, of the butter-milk, of the wool, and of the rent of a portion of the land let to under-tenants.

There are in Sicily many well cultivated vineyards; and the wine of Milazzo, of Syracuse, of Avola, and Vittoria go to Italy. That of Marsala is exported to all parts of the world, and is largely consumed in England. Hemp is also grown; but corn is the main produce of the island, and it is received in certain public magazines free of charge, which in some parts of the island are rather excavations into calcareous rocks, or holes in the ground, shaped like a bottle, walled up and made waterproof, containing each about 1600 English bushels of corn. The receipt of the *caricatore*, or keeper of the magazine, being a transferable stock, is the object of some gambling on the public exchanges of Palermo, Messina, and Catania, the speculations being grounded on the expected rise or fall of corn. So long has corn been preserved by these means, that it has been found perfectly good after the lapse of a century. The olive grows to a larger size in Sicily than on the continent of Italy, and attains a greater age, there being evidence of trees having reached the age of seven or eight centuries. The peasants respect the olive, and cannot bear that they should be destroyed, yet they take no care of them, and the oil they make is, in general, only fit for soap-boilers. The pistachio nut is cultivated here, as well as a large sort of beans, which answer the purpose of potatoes, and forming a considerable part of the food of both men and animals. The Sicilian honey is in much estimation, and owing to the great consumption of wax in churches, the proceeds of bee-hives form a valuable item in husbandry. Some cotton is grown about Terranova and Catania; and these are the principal natural resources of the country.

The chief town in Sicily is Palermo, containing

about 200,000 inhabitants. It is paved with large flat pieces of lava, with the addition of side-walks, upon which the tradespeople, such as shoemakers, tailors, &c. carry on their respective trades out of doors. There is a beautiful public garden in the town, with a fine view of the sea on one side, and on the other of the mountains which enclose the nook of level land, called the *Conca d'Oro*, or Golden Shell, in which Palermo is situated; and the fore-ground of which is occupied by fragrant groves of acacias and of orange-trees. It is overspread with villages and farms, and country houses, where people of fortune reside during the month of May, and again during part of September and October, when the rainy season is over. There is a school, the *scuola normale*, at Palermo, composed of no fewer than nine hundred and forty boys, from the age of six to that of fourteen. The mode of life of the higher ranks differs little from that of the Neapolitans. They rise very late, take a walk, dine between three and four, drive or walk about the sea-side every evening; then to the opera; then to the card-table at night; then to bed at day-break. They take no pleasure in agriculture, and never visit their landed estates in the provinces. The country houses, where they spend a few weeks in spring and autumn, being all in the neighbourhood, they live there exactly as in town. Their *conversazioni* are just the same as in Italy; people meet to play cards and eat ice, but converse very little. A man-servant at Palermo receives three *carlini* a day (thirteen pence sterling), with his board and livery; a labourer from three to four *carlini* a day, and finds his own food: but provisions are very cheap. Female servants are procured with difficulty. Land in this neighbourhood is let at about four per cent. on its estimated value. The farmers are said to be very ignorant, and to keep their accounts by means of marks or tallies. The paternal lands of noble families are entailed, and cannot be sold without special leave of the king, but purchased land may.

Messina has suffered severely from earthquakes, and was completely demolished in 1783, since which it has had the advantage of new and regular buildings. Its population is now about 70,000. Its fine quay extends more than a mile along the port, and a rocky and sandy head-land, projecting circularly, forms a deep, spacious, and tranquil harbour, accessible nearly at all times, notwithstanding the proximity of Scylla and Charybdis. Education is said to be much neglected at Messina; and the nobility do not in general reside there. It is, in short, neither fashionable, nor learned, nor rich.

Among the other towns are Syracuse, abounding with antiquities, the remains of the ancient city of that name, and Catania, in the immediate neighbourhood of Mount Etna, which has very frequently overwhelmed it by eruptions. At every such convulsion Catania has been more or less injured; but it has thrice been completely overturned or burnt down, and its inhabitants wholly or in part swallowed up, viz. once in the twelfth century, and twice in the seventeenth. Of Mount Etna, we must give an account on another occasion. Those who wish for a more circumstantial description of Sicily, should consult Brydone and Lukie's Tours, and especially Simond's Travels in Italy and Sicily, from which this account is chiefly compiled.

THE LIVING STATUE.

It often happens that motion is permanently lost in one or more joints, a disease to which surgeons have given the name of *Anchylosis*, but in the following remarkable case, which we take from the Dictionnaire des Sciences Médicales, every joint in the body became anchylosed, so that, as M. Percy observes, the brazen skeleton offered by Hippocrates in the Temple of Delphos could not be more inflexible.

The patient, whose name was Simorre, was born at Mirepoix, in the department of Arriège, on the 28th of October, 1752; he entered the army at the age of fifteen, and served for twenty-one years in the regiment of Berry, where he reached the rank of captain. He was in the three Corsican campaigns, and during the war contracted the seeds of his disease by bivouacking on a cold and marshy soil. He first suffered from shooting pains in the great toes and ankles, alternating with inflammation of the eyes; and in 1785 he could no longer walk without assistance. In the following year all his joints were affected at once, and the *anchylosis* made most alarming progress. He was obliged to quit the service, and retired to Metz. He long struggled with fortitude against his disease; his limbs were growing stiff, and in spite of his sufferings he forcibly endeavoured to move them. His arms and his head underwent the lot of his feet and knees; the whole body became inflexible; even the lower jaw, which in other persons has remained moveable, became fixed like the other joints. Simorre, to use his own expression, was then no more than a living corpse. He might, indeed, says M. Percy, have been considered comparatively happy in this unfortunate situation, had he had the insensibility of a real corpse. But far from enjoying this melancholy repose he suffered the most excruciating pain. He passed four months in an easy-chair, as it was not possible to get him into bed. His posture in the chair is that of his skeleton, which is still preserved at Paris, for it was at this period that his joints became entirely useless. He was then placed in his bed, where he passed two years without sleeping, for as soon as he closed his eyes his limbs were agitated by the most violent startings. Opium did not relieve him. In 1792 the joints, which had been swelled, began to sink; and the pain, which Simorre had borne with the dignity of a stoic, was lessened in the same proportion. He could now be moved without causing him much pain, and he was lifted up in one solid piece when it was necessary to make his bed; this, however, was only done once a month, and care was taken not to efface the hollow in which his body lay, as it would have been so painful to him to make another.

By examining the skeleton it will be seen that the right elbow was below the level of the trunk, that the spine was rather curved, and the pelvis raised in front—and that many precautions were requisite to prevent the weight of the body from resting on one part more than another. The legs formed an acute angle with the thighs, and the arms were nearly at right angles to the trunk. The fore-arms were bent upon the chest, and the wrists continually pressed upon it. The right hand was closed, and the left open. The fingers were separated, and anchylosed in that position; they were terminated by a nail or rather a horn about four inches long, and the same breadth; this was also the case in the toes. As he could not move his jaw he was obliged to suck in wine and soup through his teeth. Two of his upper incisors were drawn, which enabled him to swallow more solid food, and to speak with greater ease. He was fed with minced meat, broths, and steeped bread; a reed was used to enable him to drink.

Though his condition was now improved, Simorre was yet in a state of continual suffering; he could not sleep for more than a quarter of an hour at once; but he was contented with his lot, and consoled himself with joyous sallies and humorous songs: for several successive years he printed an almanac of songs written at his dictation; and his indigence was alleviated by the sale of this little work. His songs breathed the soul of gaiety; and he painted his condition in them in such a manner as at once to excite compassion and laughter. The muscles of his face had acquired an extraordinary degree of mobility, being unceasingly in action, partly in order to supply the want of gestures in his conversation, and partly to

drive away insects by wrinkling up his skin. Simorre had a fine face, and a physiognomy full of hilarity and expression; his rich black hair covered a broad forehead which was bounded by his thick and arched eyebrows; he had an aquiline nose, and handsome eyes. He terminated his painful career in 1802, at the age of fifty. The approach of death did not shake the fortitude of which he had given so many proofs for twelve years; the serenity of his soul remained untroubled. The cheerfulness of this man under such a severe affliction offers an encouraging example both to those who suffer disease and pain, and those who are comparatively free from the heavier evils of mortality. There is no evil which cannot be made lighter by fortitude and resignation;—and too often imaginary calamities, or false apprehensions, produce more disquietude in the gloomy and impatient mind than even poor Simorre endured under his extraordinary deprivation.

Rational Amusement.—The love of literature has prevailed from very early times among the inhabitants of the remote island of Iceland. There, the way in which the evenings of their long winter are spent, furnishes a most agreeable contrast to the miserable pot-house debauchery which fills up the leisure of too many uncultivated Englishmen, and proves the value of well-regulated knowledge, as an auxiliary to virtue. A distinguished traveller, who spent a winter in Iceland, has described a winter evening in an Icelandic family, as rendered instructive and pleasing in the highest degree, by the prevailing love of useful knowledge among all ranks. As soon as the evening shuts in, the family assemble, master and mistress, children and servants. They all take their work in their hands, except one who acts as reader. Though they have very few printed books, numbers write excellently and copy out the numerous histories of their own island. The reader is frequently interrupted by the head of the family, or some of the more intelligent members, who make remarks and propose questions to exercise the ingenuity of the children or the servants. In this way the minds of all are improved in such a degree, "that," says my informant, "I have frequently been astonished at the familiarity with which many of these self-taught peasants have discoursed on subjects, which, in other countries, we should expect to hear discussed by those only who have devoted their lives to the study of science." Let me not omit to add, that the evening thus rationally and virtuously begun, is, by these well-instructed people, closed with an act of family devotion.

[From an excellent little work just published, 'Bullar's Hints and Cautions in the Pursuit of General Knowledge.']

The Capelin.—The shell-fish shops of London have lately exhibited an article of food which was previously little known in England—the dried capelin. As a relish for the breakfast-table, this production of the coasts of Newfoundland and Labrador is likely to become extensively used. A correspondent sends us the following notice of the fish, extracted from a 'Voyage in H. M. S. ship Rosamond to Newfoundland, by Lieut. E. Chappell, R. N. 1818:' "The cod are taken by hooks, baited either with *capelin* or *herrings*. The latter is a kind of fish well known in Europe: but the capelin seems to be peculiar to the coasts of Newfoundland and Labrador. As they are equally plentiful with the cod in those countries, and are, as a bait, so essentially necessary towards obtaining the latter, a short account of them may not be unacceptable to the reader, particularly as these fish have been strangely overlooked by the most distinguished naturalists.

"The capelin is a small and delicate species of fish, greatly resembling the smelt. It visits the shores we are describing about the months of August and September, for the evident purpose of depositing its spawn upon the sandy beaches. At such times, the swarms of these fish are so numerous that they darken the surface of the sea for miles in extent, whilst the cod prey upon them with the utmost voracity. The manner of the capelin's depositing its spawn is one of the most curious circumstances attending its natural history. The male fishes are somewhat larger than the female, and are provided also with a sort of *ridge*, projecting on each side of the back-bones, similar to the eaves of a house, in which the female capelin is deficient. The latter, on approaching the beach to deposit its spawn, is attended by two male fishes, who huddle the female between them, until her whole body is concealed under the projecting ridges before mentioned, and only her head is visible. In this state they run, all three together, with great swiftness upon the sands; when the males, by some imperceptible inherent power, compress the body of the female betwixt their own, so as to expel the spawn from an orifice near the tail. Having thus accomplished its delivery, the three capelin separate; and paddling with their whole force through the shallow surf of the beach, generally succeed in regaining, once more, the bosom of the deep.

"It is an entertaining sight, while standing upon the shore, to observe myriads of these fishes, forsaking their own element, and running their bodies on the sand in all directions. Many of them find it totally impossible to return to the water, and thus the beaches of Labrador are frequently covered with dead capelin. They have so little timidity, that when the author has waded into the sea, amidst a shoal of them, he has taken two or three at a time in his hands. Upon these occasions, he was enabled to ascertain beyond a doubt, that the evacuation of the spawn is caused by a compression on the part of the male; as, when thus taken in the hand, the female capelin invariably yielded up its spawn the instant that it received the slightest pressure from the fingers. The capelin are sometimes salted and dried by the fishermen, and afterwards toasted with butter for their breakfasts."

Quackery.—Dr. F——, a physician of Montpelier, was in the habit of employing a very ingenious artifice. When he came to a town where he was not known, he pretended to have lost his dog, and ordered the public crier to offer, with beat of drum, a reward of twenty-five louis to whoever should bring it to him. The crier took care to mention all the titles and academic honours of the doctor, as well as his place of residence. He soon became the talk of the town. "Do you know," says one, "that a famous physician has come here, a very clever fellow; he must be very rich, for he offers twenty-five louis for finding his dog." The dog was not found, but patients were.

New Way to get Practice.—A poor physician, with plenty of knowledge and no practice, imparted his troubles to one of his friends. "Listen to my advice," says the other, "and follow it. The *Café de la Régence* is in fashion; I play at chess there every day at two o'clock, when the crowd is thickest; come there too; do not recognise me, and do not speak a word, but seem in a reverie; take your coffee, and always give the waiter the money in a piece of rose-coloured paper leave the rest to me." The physician followed his advice, and his oddity was soon remarked. His kind friend said to the customers of the coffee-house, "Gentlemen, do not think ill of this man because he seems an oddity; he is a profound practitioner; I have known him these fifteen years, and I could tell you of some wonderful cures that he has performed; but he thinks of nothing but his books, and never speaks except to his patients, which has prevented me from becoming intimate with him; but if ever I am obliged to keep my bed, he is the doctor for me." The friend went on in this way, varying the style of his panegyric from time to time, till by degrees all his auditors consulted the doctor with the rose-coloured paper.

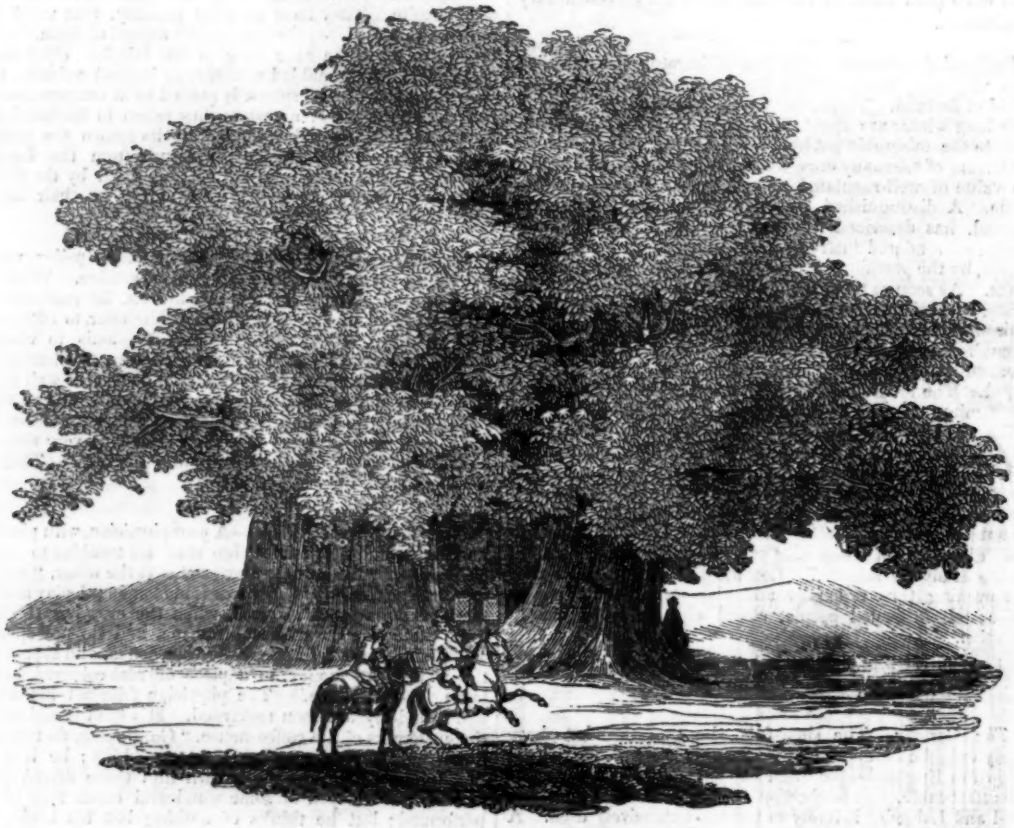
THE GIGANTIC CHESNUT TREE OF MOUNT ÆTNA.

One of the most celebrated trees in the world is the great chesnut tree of Mount Ætna, of which the following wood-cut is a representation, as it existed in 1784; it is known by the name of the *Castagno de' cento cavalli* (the Chesnut tree of a hundred horses). A tradition says, that Jane, queen of Arragon, on her voyage from Spain to Naples, landed in Sicily, for the purpose of visiting Mount Ætna; and that being overtaken by a storm, she and her hundred attendants on horseback found shelter within the enormous trunk of this celebrated tree. At any rate the name which it bears, whether the story be true or not, is expressive enough of its prodigious size.

We extract the following passage, descriptive of this tree, from the article "Ætna," in the Penny Cyclopædia:—

"It *appears* to consist of five large and two smaller trees, which, from the circumstance of the barks and boughs being all outside, are considered to have been one trunk originally. The largest trunk is thirty-eight feet in circumference, and the circuit of the whole five, measured just above the ground, is one hundred and sixty-three feet; it still bears rich foliage, and much small fruit, though the heart of the trunk is decayed, and a public road leads through it wide enough for two coaches to drive abreast. In the middle cavity a hut is built for the accommodation of those who collect and preserve the chesnuts.

"This is said, by the natives, to be 'the oldest of trees.' From the state of decay, it is impossible to have recourse to the usual mode of estimating the age of trees by counting the concentric rings of annual growth, and therefore no exact numerical expression can be assigned to the antiquity of this individual. That it may be some thousand years old is by no means improbable. Adanson examined in this manner a Baobab tree (*Adansonia digitata*) in Senegal, and inferred that it had attained the age of five thousand one hundred and fifty years; and De Candolle considers it not improbable that the celebrated Taxodium of Chapultopec, in Mexico (*Cupressus disticha*, Linn.), which is one hundred and seventeen feet in circumference, may be still more aged.'



[Great Chesnut Tree of Mount Ætna.]

It is evident that if the great chesnut tree were in reality a collection of trees, as it appears to be, the wonder of its size would at once be at an end. Brydone, who visited it in 1770, says—

"I own I was by no means struck with its appearance, as it does not seem to be one tree, but a bush of five large trees growing together. We complained to our guides of the imposition; when they unanimously assured us, that by the universal tradition, and even testimony of the country, all these were once united in one stem; that their grandfathers remembered this, when it was looked upon as the glory of the forest, and visited from all quarters; that for many years past it had been reduced to the venerable ruin we beheld. We began to examine it with more attention, and found that there was indeed an appearance as if these five trees had really been once united in one. The opening in the middle is at present prodigious; and it does indeed require faith to believe, that so vast a space was once occupied by solid timber. But there is no appearance of bark on the inside of any of the stumps, nor on the sides that are opposite to one another. I have since been told by the Canonico Recupero, an ingenious ecclesiastic of this place, that he was at the expense of carrying up peasants with tools to dig round the Castagno de' cento cavalli, and he assures me, upon his honour, that he found all these stems united below ground in one root."

Houel, in his 'Voyage Pittoresque des Isles de Sicile, tome ii. p. 79, 1784, has given a plate of this tree, from which the above cut is copied. He appears to have taken great pains to ascertain the fact of there being only one trunk, and to have completely satisfied himself that the apparent divisions have been produced, partly by the decay of time, and partly by the peasants continually cutting out portions of the wood and bark for fuel.

*** The Office of the Society for the Diffusion of Useful Knowledge is at 59, Lincoln's Inn Fields.

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